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RICHARD W. WIERING
CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

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JS

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E-filing

23 UNITED STATES DISTRICT COURT
24 NORTHERN DISTRICT OF CALIFORNIA

25 PAGEMELDING, INC.,

26 Plaintiff,

27 vs.

28 FEEVA TECHNOLOGY, INC., HITWISE
USA, INC., KINDSIGHT, INC.,
MICROSOFT CORPORATION, AND
NEBUAD, INC.,

Defendants.

Civil Action File

CV

No.

08

3484

HRL

COMPLAINT FOR PATENT
INFRINGEMENT

DEMAND FOR JURY TRIAL

1 Plaintiff PageMelding, Inc. ("PageMelding") hereby makes this Complaint against
2 defendants Feeva Technology, Inc. ("Feeva"), Hitwise USA, Inc. ("Hitwise"), Kindsight, Inc.
3 ("Kindsight"), Microsoft Corporation ("Microsoft") and Nebuad, Inc., ("Nebuad") (collectively
4 "Defendants") and in support hereof respectfully shows the Court as follows:

5 **PARTIES**

6 1. Plaintiff PageMelding is a California corporation, having its principal place of
7 business at 14520 Mono Way, Suite 200, Sonoma, California 95370. PageMelding is a subsidiary of
8 Front Porch, Inc. ("Front Porch"), the worldwide leader in customer messaging and advertising
9 solutions for Internet providers. Front Porch's solutions are deployed in 33 different countries and
10 over 3,000 locations.

11 2. Upon information and belief, Defendant Feeva is a Delaware corporation, having its
12 principal place of business at 500 Howard Street, Suite 425, San Francisco, California 94105. Feeva
13 may be served with process through its Agent for Service of Process, Jasminder Banga, 500 Howard
14 Street, Suite 425, San Francisco, California 94105.

15 3. Upon information and belief, Defendant Hitwise is a Delaware corporation, having its
16 principal place of business at 2 Bryant Street, Suite 240, San Francisco, California 94105. Hitwise
17 may be served with process through its Agent for Service of Process, GKL Corporate/Search, Inc.,
18 915 L Street, Suite 1250, Sacramento, California 95814.

19 4. Upon information and belief, Defendant Kindsight is a Delaware corporation, having
20 its principal place of business at 400 Capitol Mall, Suite 3000, Sacramento, California 95814.
21 Kindsight may be served with process through its Agent for Service of Process, Corporation Service
22 Company, d/b/a CSC-Lawyers Incorporating Service, 2730 Gateway Oaks Drive, Suite 100,
23 Sacramento, California 95833.

24 5. Upon information and belief, Microsoft Corporation is a Washington corporation,
25 having its principal place of business at One Microsoft Way, Redmond, Washington 98052.
26 Microsoft may be served with process through its Agent for Service of Process, CSC - Lawyers
27 Incorporating Service, 2730 Gateway Oaks Drive, Suite 100, Sacramento, California 95833.

6. Upon information and belief, Defendant Nebuad is a Delaware corporation, having its principal place of business at 901 Marshall Street, 2nd Floor, Redwood City, California 94063. Nebuad may be served with process through its Agent for Service of Process, Daniel Miller, 901 Marshall Street, 2nd Floor, Redwood City, California 94063.

JURISDICTION AND VENUE

7. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §101 *et seq.*

8. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§1331 and 1338(a).

9. Feeva is subject to this Court's specific and general personal jurisdiction because it is a resident of the State of California and, pursuant to due process and/or the California Long Arm Statute, due at least to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in California and this Judicial District.

10. Hitwise is subject to this Court's specific and general personal jurisdiction because it is a resident of the State of California and, pursuant to due process and/or the California Long Arm Statute, due at least to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in California and this Judicial District.

11. Kindsight is subject to this Court's specific and general personal jurisdiction because it is a resident of the State of California and, pursuant to due process and/or the California Long Arm Statute, due at least to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in California and this Judicial District.

12. Microsoft is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the California Long Arm Statute, due at least to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in California and this Judicial District.

13. Nebuad is subject to this Court's specific and general personal jurisdiction because it is a resident of the State of California and, pursuant to due process and/or the California Long Arm Statute, due at least to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in California and this Judicial District.

14. Venue is proper in this Court pursuant to 28 U.S.C. §§1391 and 1400(b). Defendants have done business in this Judicial District, committed acts of infringement in this District, and continue to commit acts of infringement in this Judicial District, all of which entitle PageMelding to relief.

BACKGROUND OF DISPUTE

15. Internet advertisers place a premium value on the capability to provide specific information to a particular audience. Because advertisers seek a targeted audience, the ability of the Internet advertisers to obtain information about a requestor of information can be extremely valuable.

16. U.S. Patent No. 6,442,577 (the “‘577 patent”), entitled “Method and Apparatus for Dynamically Forming Customized Web Pages for Web Sites,” was duly and legally issued on August 27, 2002 by the U.S. Patent and Trademark Office to Front Porch. PageMelding, a subsidiary of Front Porch, is the assignee of the ‘577 patent. A copy of the ‘577 patent is attached hereto as Exhibit A.

17. Inventors Britton and Maxson, as well as their company, are recognized as pioneers in the field of maximizing value for Internet advertisers. The innovative approach disclosed in the '577 patent alleviates some of the privacy and security concerns associated with prior art systems.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 6,442,577
(Feeva)

18. PageMelding restates and realleges the allegations set forth in paragraphs 1 through 17 of this Complaint and incorporates them by reference.

19. PageMelding is the sole owner of the entire right, title, and interest in the '577 Patent, including the right to seek past damages, by virtue of assignment from Front Porch, properly filed with the U.S. Patent and Trademark Office.

20. Defendant Feeva has infringed, continues to infringe, and unless enjoined will continue to infringe one or more claims of the '577 patent, directly, contributorily, and/or by inducement, by making, using, selling, and/or offering for sale in this country, and/or importing into this country, and inducing others to use, without license, certain products and/or services that consist of and/or incorporate the methods and/or apparatus disclosed in the '577 patent for dynamically forming customized web pages, in violation of 35 U.S.C. §271.

21. The acts of infringement of the '577 patent by Feeva has caused damage to PageMelding, and PageMelding is entitled to recover from Feeva the damages sustained by PageMelding as a result of their wrongful acts in an amount subject to proof at trial. The infringement of PageMelding's exclusive rights under the '577 patent by Feeva will continue to damage PageMelding, causing irreparable harm, for which there is no adequate remedy at law, unless enjoined by this Court.

22. Feeva has had actual or constructive knowledge of the '577 patent, yet continues to infringe said patent. The infringement of the '577 patent by Feeva is willful and deliberate, entitling PageMelding to increased damages under 35 U.S.C. §284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. §285.

COUNT II
INFRINGEMENT OF U.S. PATENT NO. 6,442,577
(Hitwise)

23. PageMelding restates and realleges the allegations set forth in paragraphs 1 through 22 of this Complaint and incorporates them by reference.

1 24. PageMelding is the sole owner of the entire right, title, and interest in the '577 Patent,
2 including the right to seek past damages, by virtue of assignment from Front Porch, properly filed
3 with the U.S. Patent and Trademark Office.

4 25. Defendant Hitwise has infringed, continues to infringe, and unless enjoined will
5 continue to infringe one or more claims of the '577 patent, directly, contributorily, and/or by
6 inducement, by making, using, selling, and/or offering for sale in this country, and/or importing into
7 this country, and inducing others to use, without license, certain products and/or services that consist
8 of and/or incorporate the methods and/or apparatus disclosed in the '577 patent for dynamically
9 forming customized web pages, in violation of 35 U.S.C. §271.

10 26. The acts of infringement of the '577 patent by Hitwise has caused damage to
11 PageMelding, and PageMelding is entitled to recover from Hitwise the damages sustained by
12 PageMelding as a result of their wrongful acts in an amount subject to proof at trial. The
13 infringement of PageMelding's exclusive rights under the '577 patent by Hitwise will continue to
14 damage PageMelding, causing irreparable harm, for which there is no adequate remedy at law,
15 unless enjoined by this Court.

16 27. Hitwise has had actual or constructive knowledge of the '577 patent, yet continues to
17 infringe said patent. The infringement of the '577 patent by Hitwise is willful and deliberate,
18 entitling PageMelding to increased damages under 35 U.S.C. §284 and to attorneys' fees and costs
19 incurred in prosecuting this action under 35 U.S.C. §285.

20 **COUNT III**
21 **INFRINGEMENT OF U.S. PATENT NO. 6,442,577**
 (Kindsight)

22 28. PageMelding restates and realleges the allegations set forth in paragraphs 1 through
23 27 of this Complaint and incorporates them by reference.

24 29. PageMelding is the sole owner of the entire right, title, and interest in the '577 Patent,
25 including the right to seek past damages, by virtue of assignment from Front Porch, properly filed
26 with the U.S. Patent and Trademark Office.

27 30. Defendant Kindsight has infringed, continues to infringe, and unless enjoined will
28 continue to infringe one or more claims of the '577 patent, directly, contributorily, and/or by

1 inducement, by making, using, selling, and/or offering for sale in this country, and/or importing into
2 this country, and inducing others to use, without license, certain products and/or services that consist
3 of and/or incorporate the methods and/or apparatus disclosed in the '577 patent for dynamically
4 forming customized web pages, in violation of 35 U.S.C. §271.

5 31. The acts of infringement of the '577 patent by Kindsight has caused damage to
6 PageMelding, and PageMelding is entitled to recover from Kindsight the damages sustained by
7 PageMelding as a result of their wrongful acts in an amount subject to proof at trial. The
8 infringement of PageMelding's exclusive rights under the '577 patent by Kindsight will continue to
9 damage PageMelding, causing irreparable harm, for which there is no adequate remedy at law,
10 unless enjoined by this Court.

11 32. Kindsight has had actual or constructive knowledge of the '577 patent, yet continues
12 to infringe said patent. The infringement of the '577 patent by Kindsight is willful and deliberate,
13 entitling PageMelding to increased damages under 35 U.S.C. §284 and to attorneys' fees and costs
14 incurred in prosecuting this action under 35 U.S.C. §285.

15 **COUNT IV**
16 **INFRINGEMENT OF U.S. PATENT NO. 6,442,577**
(Microsoft)

17 33. PageMelding restates and realleges the allegations set forth in paragraphs 1 through
18 32 of this Complaint and incorporates them by reference.

19 34. PageMelding is the sole owner of the entire right, title, and interest in the '577 Patent,
20 including the right to seek past damages, by virtue of assignment from Front Porch, properly filed
21 with the U.S. Patent and Trademark Office.

22 35. Defendant Microsoft has infringed, continues to infringe, and unless enjoined will
23 continue to infringe one or more claims of the '577 patent, directly, contributorily, and/or by
24 inducement, by making, using, selling, and/or offering for sale in this country, and/or importing into
25 this country, and inducing others to use, without license, certain products and/or services that consist
26 of and/or incorporate the methods and/or apparatus disclosed in the '577 patent for dynamically
27 forming customized web pages, in violation of 35 U.S.C. §271.

1 damage PageMelding, causing irreparable harm, for which there is no adequate remedy at law,
2 unless enjoined by this Court.

3 42. Nebuad has had actual or constructive knowledge of the '577 patent, yet continues to
4 infringe said patent. The infringement of the '577 patent by Nebuad is willful and deliberate,
5 entitling PageMelding to increased damages under 35 U.S.C. §284 and to attorneys' fees and costs
6 incurred in prosecuting this action under 35 U.S.C. §285.

7 **PRAYER FOR RELIEF**

8 WHEREFORE, Plaintiff prays for the following relief against Defendants:

9 A. A judgment that Defendants, and each one of them, have directly infringed the '577
10 Patent, contributorily infringed the '577 Patent, and/or induced infringement of the '577 Patent;

11 B. An award of all damages recoverable under the laws of the United States and the laws
12 of the State of California in an amount to be proven at trial;

13 C. An award of treble damages against Defendants, and each one of them, as a result of
14 their willful infringement;

15 D. A preliminary, and thereafter permanent, injunction enjoining and restraining
16 Defendants, and each one of them, and their officers, directors, agents, servants, employees,
17 attorneys, and all others acting under, by or through them, from directly infringing, contributorily
18 infringing, and inducing the infringement of the '577 Patent, as set forth herein;

19 E. A judgment and order requiring Defendants, and each one of them, to pay Plaintiff's
20 pre-judgment and post-judgment interest on the full amounts of the damages awarded;

21 F. A judgment requiring Defendants, and each one of them, to pay the costs of this
22 action (including all disbursements) and attorneys' fees as provided by 35 U.S.C. §285, with
23 prejudgment interest; and

24 G. Such other and further relief as this Court may deem just and equitable.
25
26
27
28

DEMAND FOR JURY TRIAL

Plaintiff hereby demands that all issues so triable be determined by a jury.

Respectfully submitted, this 21st day of July, 2008.

COUGHLIN STOIA GELLER RUDMAN &
ROBBINS LLP



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PageMelding, Inc.

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ORIGINAL

JS 44 (Rev. 12/07) (and rev 1-16-08)

CIVIL COVER SHEET

The JS 44 civil cover sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. (SEE INSTRUCTIONS ON PAGE TWO OF THE FORM.)

I. (a) PLAINTIFFS

PAGEMELDING, INC.

DEFENDANTS

FEEVA TECHNOLOGY, INC., HITWISE USA, INC., KINDSIGHT, INC., MICROSOFT CORPORATION, and NEBUAD, INC.

(b) County of Residence of First Listed Plaintiff Tuolumne County, CA
(EXCEPT IN U.S. PLAINTIFF CASES)

County of Residence of First Listed Defendant San Francisco County, CA
(IN U.S. PLAINTIFF CASES ONLY)

NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE LAND INVOLVED.

(c) Attorney's (Firm Name, Address, and Telephone Number)

John K. Grant
Coughlin Stoia Geller Rudman & Robbins LLP
100 Pine Street, 26th Floor
San Francisco, CA 94111 (415) 288-4545

Attorneys (If Known)

II. BASIS OF JURISDICTION (Place an "X" in One Box Only)

- ☐ 1 U.S. Government Plaintiff
☒ 3 Federal Question (U.S. Government Not a Party)
☐ 2 U.S. Government Defendant
☐ 4 Diversity (Indicate Citizenship of Parties in Item III)

III. CITIZENSHIP OF PRINCIPAL PARTIES (Place an "X" in One Box for Plaintiff and One Box for Defendant)

- (For Diversity Cases Only)
- | | | | | | |
|---|----------------------------|----------------------------|---|----------------------------|----------------------------|
| | PTF | DEF | | PTF | DEF |
| Citizen of This State | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | Incorporated or Principal Place of Business in This State | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 |
| Citizen of Another State | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | Incorporated and Principal Place of Business in Another State | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 |
| Citizen or Subject of a Foreign Country | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | Foreign Nation | <input type="checkbox"/> 6 | <input type="checkbox"/> 6 |

IV. NATURE OF SUIT (Place an "X" in One Box Only)

CONTRACT	TORTS	FORFEITURE/PENALTY	BANKRUPTCY	OTHER STATUTES
<input type="checkbox"/> 110 Insurance <input type="checkbox"/> 120 Marine <input type="checkbox"/> 130 Miller Act <input type="checkbox"/> 140 Negotiable Instrument <input type="checkbox"/> 150 Recovery of Overpayment & Enforcement of Judgment <input type="checkbox"/> 151 Medicare Act <input type="checkbox"/> 152 Recovery of Defaulted Student Loans (Excl. Veterans) <input type="checkbox"/> 153 Recovery of Overpayment of Veteran's Benefits <input type="checkbox"/> 160 Stockholders' Suits <input type="checkbox"/> 190 Other Contract <input type="checkbox"/> 195 Contract Product Liability <input type="checkbox"/> 196 Franchise	PERSONAL INJURY <input type="checkbox"/> 310 Airplane <input type="checkbox"/> 315 Airplane Product Liability <input type="checkbox"/> 320 Assault, Libel & Slander <input type="checkbox"/> 330 Federal Employers' Liability <input type="checkbox"/> 340 Marine <input type="checkbox"/> 345 Marine Product Liability <input type="checkbox"/> 350 Motor Vehicle <input type="checkbox"/> 355 Motor Vehicle Product Liability <input type="checkbox"/> 360 Other Personal Injury	PERSONAL INJURY <input type="checkbox"/> 362 Personal Injury—Med. Malpractice <input type="checkbox"/> 365 Personal Injury—Product Liability <input type="checkbox"/> 368 Asbestos Personal Injury Product Liability PERSONAL PROPERTY <input type="checkbox"/> 370 Other Fraud <input type="checkbox"/> 371 Truth in Lending <input type="checkbox"/> 380 Other Personal Property Damage <input type="checkbox"/> 385 Property Damage Product Liability	<input type="checkbox"/> 610 Agriculture <input type="checkbox"/> 620 Other Food & Drug <input type="checkbox"/> 625 Drug Related Seizure of Property 21 USC 881 <input type="checkbox"/> 630 Liquor Laws <input type="checkbox"/> 640 R.R. & Truck <input type="checkbox"/> 650 Airline Regs. <input type="checkbox"/> 660 Occupational Safety/Health <input type="checkbox"/> 690 Other	<input type="checkbox"/> 422 Appeal 28 USC 158 <input type="checkbox"/> 423 Withdrawal 28 USC 157 PROPERTY RIGHTS <input type="checkbox"/> 820 Copyrights <input checked="" type="checkbox"/> 830 Patent <input type="checkbox"/> 840 Trademark
REAL PROPERTY <input type="checkbox"/> 210 Land Condemnation <input type="checkbox"/> 220 Foreclosure <input type="checkbox"/> 230 Rent Lease & Ejectment <input type="checkbox"/> 240 Torts to Land <input type="checkbox"/> 245 Tort Product Liability <input type="checkbox"/> 290 All Other Real Property	CIVIL RIGHTS <input type="checkbox"/> 441 Voting <input type="checkbox"/> 442 Employment <input type="checkbox"/> 443 Housing/Accommodations <input type="checkbox"/> 444 Welfare <input type="checkbox"/> 445 Amer. w/Disabilities - Employment <input type="checkbox"/> 446 Amer. w/Disabilities - Other <input type="checkbox"/> 440 Other Civil Rights	PRISONER PETITIONS <input type="checkbox"/> 510 Motions to Vacate Sentence <input type="checkbox"/> 530 General Habeas Corpus <input type="checkbox"/> 535 Death Penalty <input type="checkbox"/> 540 Mandamus & Other <input type="checkbox"/> 550 Civil Rights <input type="checkbox"/> 555 Prison Condition	LABOR <input type="checkbox"/> 710 Fair Labor Standards Act <input type="checkbox"/> 720 Labor/Mgmt. Relations <input type="checkbox"/> 730 Labor/Mgmt. Reporting & Disclosure Act <input type="checkbox"/> 740 Railway Labor Act <input type="checkbox"/> 790 Other Labor Litigation <input type="checkbox"/> 791 Empl. Ret. Inc. Security Act	<input type="checkbox"/> 400 State Reapportionment <input type="checkbox"/> 410 Antitrust <input type="checkbox"/> 430 Banks and Banking <input type="checkbox"/> 450 Commerce <input type="checkbox"/> 460 Deportation <input type="checkbox"/> 470 Racketeer Influenced and Corrupt Organizations <input type="checkbox"/> 480 Consumer Credit <input type="checkbox"/> 490 Cable/Sat TV <input type="checkbox"/> 810 Selective Service <input type="checkbox"/> 850 Securities/Commodities/Exchange <input type="checkbox"/> 875 Customer Challenge 12 USC 3410 <input type="checkbox"/> 890 Other Statutory Actions <input type="checkbox"/> 891 Agricultural Acts <input type="checkbox"/> 892 Economic Stabilization Act <input type="checkbox"/> 893 Environmental Matters <input type="checkbox"/> 894 Energy Allocation Act <input type="checkbox"/> 895 Freedom of Information Act <input type="checkbox"/> 900 Appeal of Fee Determination Under Equal Access to Justice <input type="checkbox"/> 950 Constitutionality of State Statutes
		IMMIGRATION <input type="checkbox"/> 462 Naturalization Application <input type="checkbox"/> 463 Habeas Corpus - Alien Detainee <input type="checkbox"/> 465 Other Immigration Actions	SOCIAL SECURITY <input type="checkbox"/> 861 HIA (1395ff) <input type="checkbox"/> 862 Black Lung (923) <input type="checkbox"/> 863 DIWC/DIWW (405(g)) <input type="checkbox"/> 864 SSID Title XVI <input type="checkbox"/> 865 RS1 (405(g))	FEDERAL TAX SUITS <input type="checkbox"/> 870 Taxes (U.S. Plaintiff or Defendant) <input type="checkbox"/> 871 IRS—Third Party 26 USC 7609

V. ORIGIN

(Place an "X" in One Box Only)

- ☒ 1 Original Proceeding
☐ 2 Removed from State Court
☐ 3 Remanded from Appellate Court
☐ 4 Reinstated or Reopened
☐ 5 Transferred from another district (specify)
☐ 6 Multidistrict Litigation
☐ 7 Appeal to District Judge from Magistrate Judgment

VI. CAUSE OF ACTION

Cite the U.S. Civil Statute under which you are filing (Do not cite jurisdictional statutes unless diversity):
 35 U.S.C. § 101 et seq.
 Brief description of cause:
 Patent Infringement

VII. REQUESTED IN COMPLAINT:

☐ CHECK IF THIS IS A CLASS ACTION UNDER F.R.C.P. 23

DEMAND \$

CHECK YES only if demanded in complaint:
 JURY DEMAND: ☒ Yes ☐ No

VIII. RELATED CASE(S) IF ANY

PLEASE REFER TO CIVIL L.R. 3-12 CONCERNING REQUIREMENT TO FILE "NOTICE OF RELATED CASE".

IX. DIVISIONAL ASSIGNMENT (CIVIL L.R. 3-2)

(PLACE AND "X" IN ONE BOX ONLY)

☒ SAN FRANCISCO/OAKLAND

☐ SAN JOSE

DATE

July 21, 2008

SIGNATURE OF ATTORNEY OF RECORD

[Signature]

(12) **United States Patent**
Britton et al.

(10) **Patent No.:** **US 6,442,577 B1**
(45) **Date of Patent:** **Aug. 27, 2002**

(54) **METHOD AND APPARATUS FOR
DYNAMICALLY FORMING CUSTOMIZED
WEB PAGES FOR WEB SITES**

6,141,666 A * 10/2000 Tobin 707/513
6,308,188 B1 * 10/2001 Bernardo et al. 707/501.1

OTHER PUBLICATIONS

(75) Inventors: **Zachary E. Britton; Derek S. Maxson,**
both of Sonora, CA (US)

Kohda et al, "Ubiquitous Advertising on the WWW", 5h
Int'l WWW Conf., Paris, 1996, <http://www5conf.inria.fr/
fich13.html/papers/P52/Overview.html>, 8 pages.*

(73) Assignee: **Front Porch, Inc.,** Sonora, CA (US)

* cited by examiner

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

Primary Examiner—Joseph H. Feild

(74) *Attorney, Agent, or Firm*—Robroy R. Fawcett

(57) **ABSTRACT**

(21) Appl. No.: **09/185,145**

To attract traffic flow from other web sites, such as Internet
Service Providers (ISPs) and organizations that have direct
access to the Internet, an Internet Content Provider (ICP)
dynamically forms customized web pages for its participat-
ing web sites. Specifically, the ICP stores web page files
designed for itself and its participating web sites. Upon
receiving a service request from a participating web site, the
ISP dynamically forms customized web pages for the par-
ticipating web site by combining the page files designed for
itself and the page files designed for the participating web
site.

(22) Filed: **Nov. 3, 1998**

(51) **Int. Cl.**⁷ **G06F 17/21**

(52) **U.S. Cl.** **707/513; 705/27; 709/218**

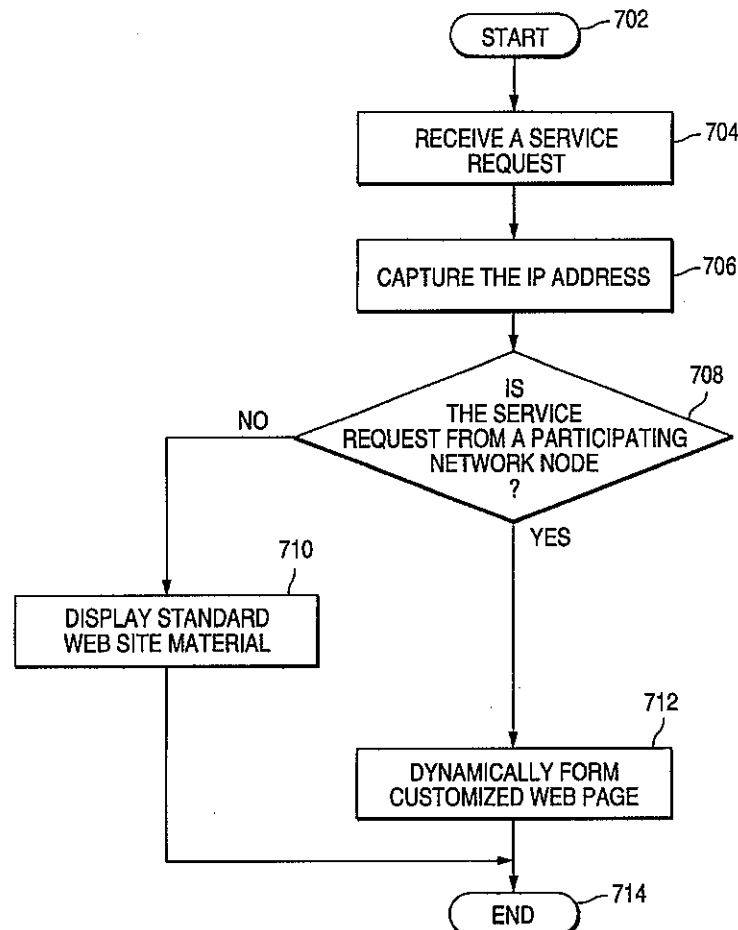
(58) **Field of Search** **707/513, 501.1;**
705/26-27, 14; 345/760; 709/203, 217-219

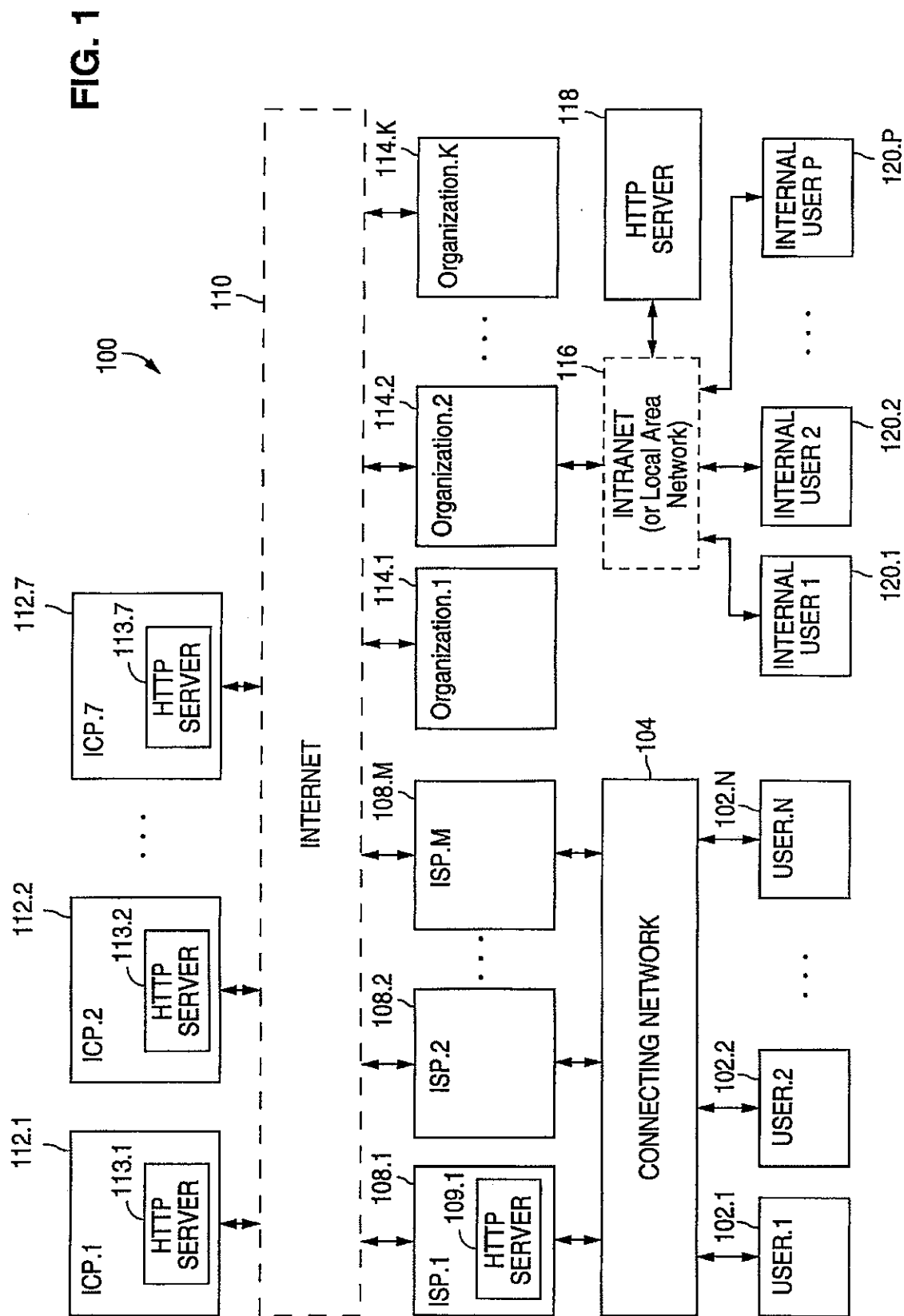
(56) **References Cited**

U.S. PATENT DOCUMENTS

5,933,811 A * 8/1999 Angles et al. 705/14
6,009,410 A * 12/1999 LeMole et al. 705/1

30 Claims, 7 Drawing Sheets





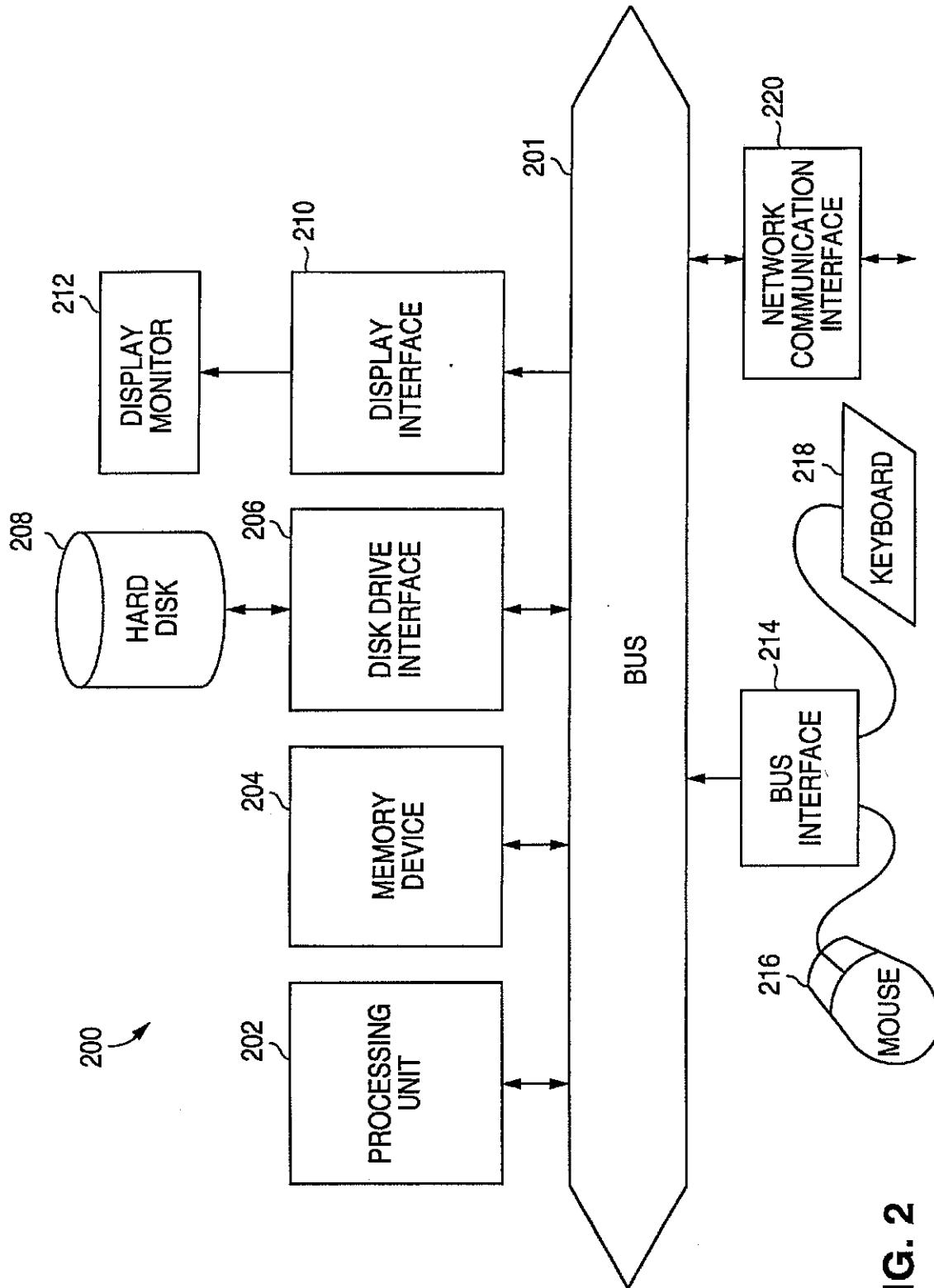


FIG. 2

300

302 IP Addresses	304 DNS	306 Name
208.135.53.129	ts1-1.miode.com	Mother Lode
137.118.9.4	firewall.volcano.net	Volcano
207.104.48.xxx	Gold Rush.com	Gold Rush
123.567.89.25	XYZ.edu	XYZ

FIG. 3

400

402 Name	404 Page Portion 1	406 Page Portion 2	408 Page Portion 3
Mother Lode	HTML content	HTML with graphics	HTML with Javascript menu
Volcano	HTML content	HTML with graphics	HTML with Javascript menu
Gold Rush	HTML content	HTML with graphics	HTML with Javascript menu
XYZ	HTML content	HTML with graphics	HTML with Javascript menu

FIG. 4

500

502	504	506	508
Page Code	IP Addresses	Default Advertisement	Alternative Advertisement
01	208.135.53.129	Mother Lode	Telephone Service
02	137.118.9.4	Volcano	Furniture Store
03	207.104.48.xxx	Gold Rush	Automotive
04	123.567.89.25	XYZ	Office Supply

≈ ≈ ≈ ≈ ≈

FIG. 5

600

604	602
Name	Advertisement
Mother Lode	MAd.HTML
Volcano	VAd.HTML
Gold Rush	GAd.HTML
XYZ	XAd.HTML
Telephone Service	TAd.HTML
Furniture Store	FAd.HTML
Automotive	AAd.HTML
Office Supply	OAd.HTML

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FIG. 6

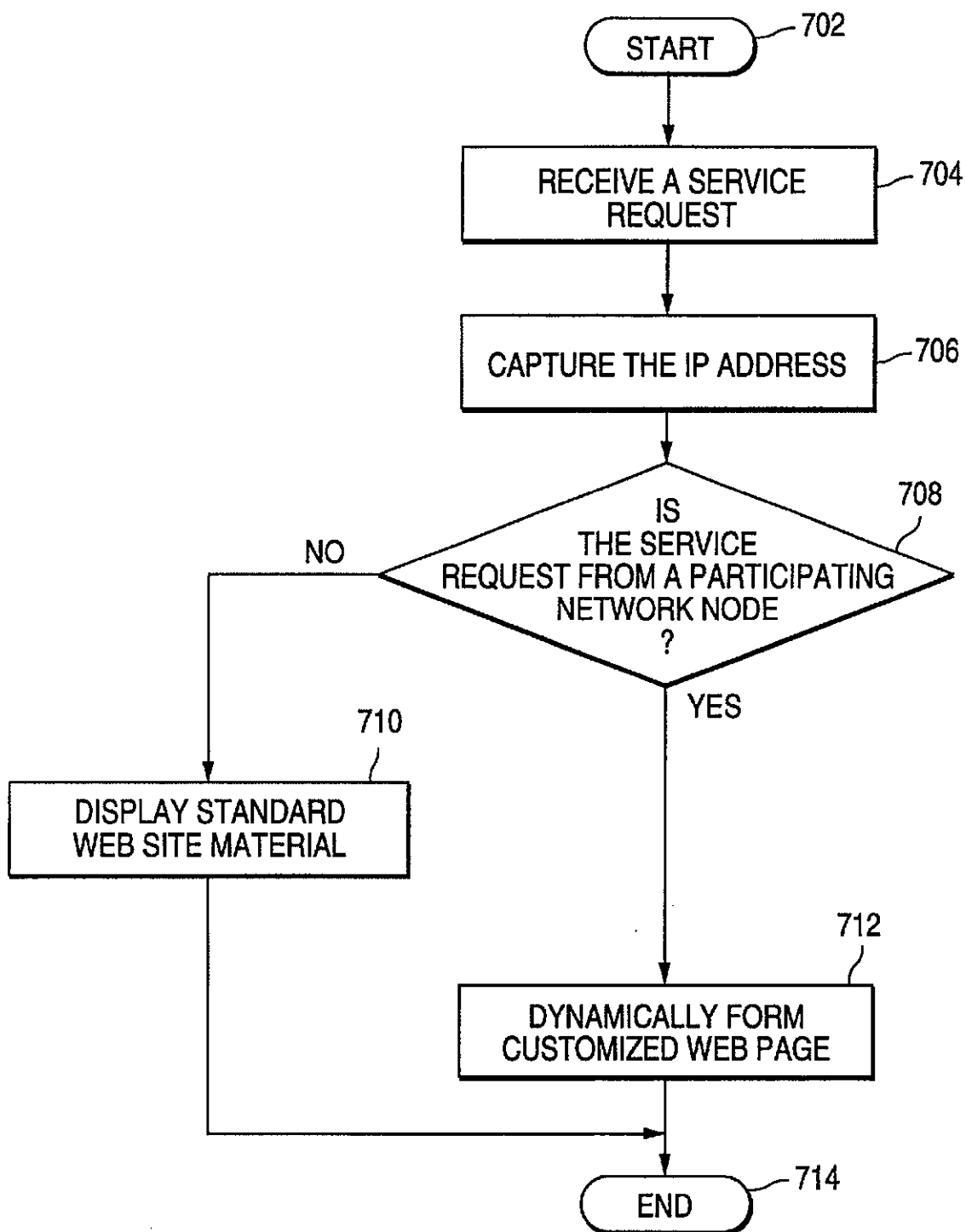


FIG. 7

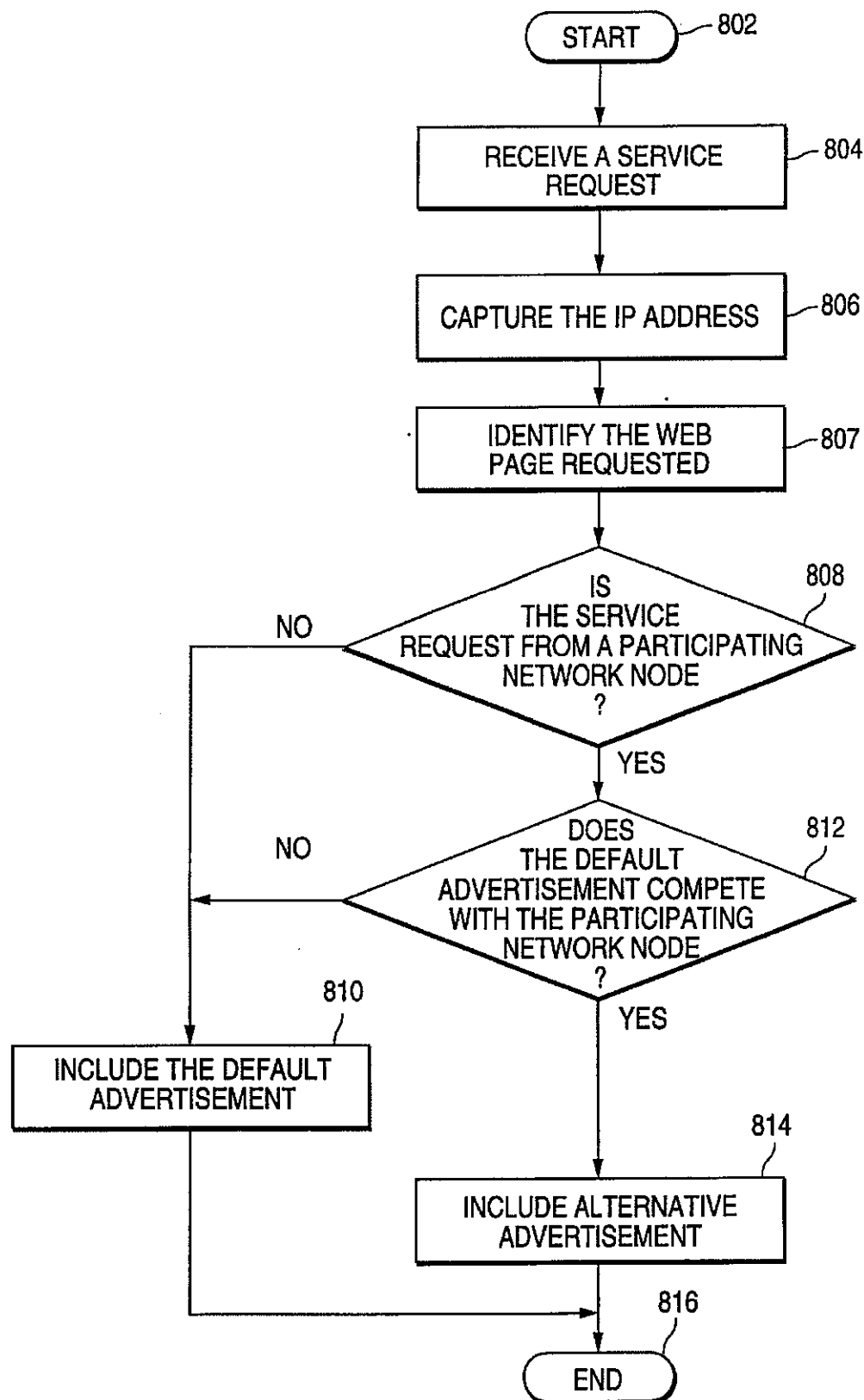


FIG. 8

FIG. 9

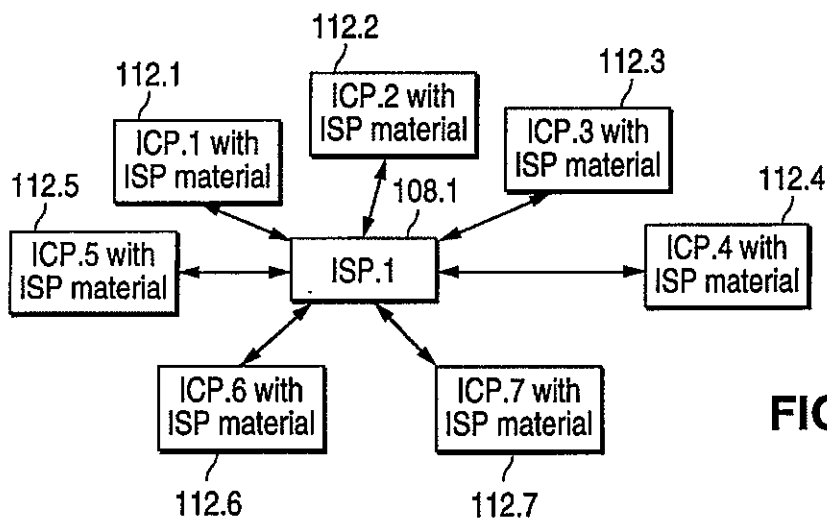
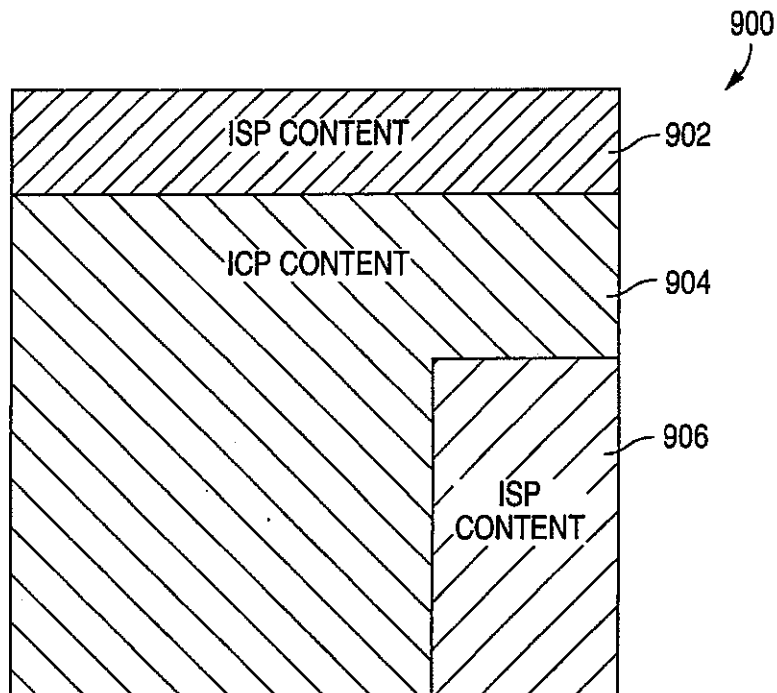


FIG. 10

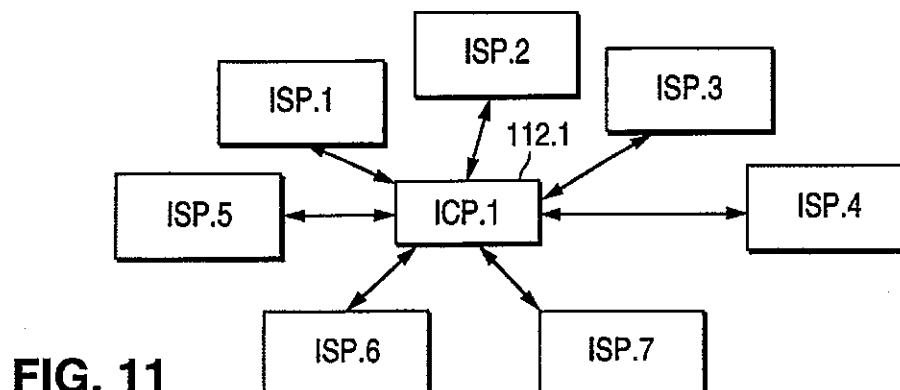


FIG. 11

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METHOD AND APPARATUS FOR DYNAMICALLY FORMING CUSTOMIZED WEB PAGES FOR WEB SITES

FIELD OF THE INVENTION

The present invention relates generally to forming web pages at Internet Content Provider (ICP) web sites, and more specifically to forming web pages for Internet Service Providers (ISPs) and organizations having direct access to the Internet.

BACKGROUND OF THE INVENTION

With the rapid development of information technology and networking infrastructure, Internet users can search through vast amounts of information provided by ICPs via the Internet. Most individual Internet users get access to the Internet by subscribing to Internet services from ISPs. The ISPs furnish the hardware and software to access the Internet for their subscribers. To access the Internet, an individual user first sends a service request to his/her ISP. Upon receiving the service request, the ISP processes the service request for the user who sent it. Usually, ISPs also have their own web sites for their users.

Some organizations, such as corporations, governmental institutions, and universities, have financial and technical resources to install their own hardware and software to access the Internet so that they can be connected to the Internet without using ISPs. Typically, these organizations have Intranet (or local area network) infrastructures for inter-connecting their internal users and for providing the internal users with access to the Internet. These organizations may also have their own web sites for external and internal users.

One main objective of ICPs is to get as many Internet users to visit their web sites as possible, because each time a web page is accessed by a visitor, the ICPs may get revenue for the advertisements contained in the web page. The inventors have been creating and managing web sites for many ICPs. In attempting to attract Internet traffic for their clients' web sites, the inventors have conducted research to determine traffic patterns flowing into a typical ICP web site. The research data demonstrated that ICP's web sites have a great potential to attract Internet traffic from ISPs. This is especially true for the ISPs with poor quality web sites, having no local information, news, weather broadcasting, etc. The underline reason is that, unlike ICPs, ISPs usually do not have sufficient resource and expertise to design good quality web sites. Once an ISP user is connected to the Internet via an ISP, the user has the tendency to leave the ISP's web site and go to ICP's web sites to search for desired information.

Efforts have been made to persuade some ISPs to use ICPs' web sites as the default home pages for their subscribers. However, these ISPs declined such offers, noting that they can gain no benefits from this arrangement. In fact, these ISPs felt using an ICP's home page may have a negative effect on their businesses. For example, a subscribed user who came to an ICP's web site may see advertisements from competing ISPs, which could result in losing that ISP user.

ICPs can also attract Internet traffic from organizations that have direct access to the Internet. Like ISPs, these organizations also have the same limitations and concerns.

Accordingly, it is desirable to dynamically form customized web pages at an ICP web site to satisfy different needs

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and requirements for different ISPs and organizations. Such an approach can create a win-win relationship between an ICP and an ISP, or between an ICP and an organization. The ISP, or the organization, could get a much better Internet portal that provides value added services to its subscribers or internal users, without having negative impacts on its business. The ICP, in turn, would receive increased traffic.

There is, therefore, a need for a method and apparatus which enable an ICP to dynamically form customized web pages for ISPs and organizations that have direct access to the Internet.

There is another need for a method and apparatus which enable an ICP to dynamically select advertisements to be included in customized web pages.

The present invention provides the methods and apparatuses to meet these needs.

SUMMARY OF THE INVENTION

To address the shortcomings of the prior art, the present invention provides improved methods for dynamically forming customized web pages for ISPs, and organizations that have direct access to the Internet.

In one aspect, the present invention provides a method for dynamically forming customized web pages for a first type network node at a second type network node. The method comprises the steps of: forming at least a page file for the first type network node; forming at least a page file for the second type network node; receiving a service request from the first type network node; identifying the first type network node; and forming a customized page file formed for the first type network node by including the page file formed for the second type network node.

In another aspect, the present invention provides a method for providing web page customization service to a plurality of first type network nodes at a second type network node. The method comprises the steps of: forming at least a page file for each of the first type network nodes; forming at least a page file for the second type network node; receiving a service request from one of the first type network nodes; determining whether the first type network node participates in the web page customization service; if the first type network node participates in the web page customization service, forming a customized page file for the service request by including the page file formed for the first type network node within the page file formed for the second type network node; and if the first type network node does not participate in the web page customization service, forming a page file for the service request by using the page file formed for the second type network node.

In still another aspect, the present invention provides a method for providing web page customization service to a plurality of first type network nodes at a second type network node. The method comprises the steps of: forming a plurality of advertisements for the first type network nodes; forming at least a page file for the second type network node; receiving a service request from one of the first type network nodes; identifying advertisements for the first type network node; and forming a customized page file for the first type network node by including the identified advertisements within the page file formed for the second type network node.

The present invention also provides the apparatuses for performing the corresponding methods as recited above.

BRIEF DESCRIPTION OF THE DRAWING

The aforementioned advantages of the present invention as well as additional advantages thereof will be more clearly

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understood hereinafter as a result of a detailed description of a preferred embodiment of the invention when taken in conjunction with the following drawings in which:

FIG. 1 depicts an exemplary network system, which can be used to perform the functions of the present invention;

FIG. 2 depicts a block diagram illustrating an exemplary computer system, which can be used to implement the present invention;

FIG. 3 depicts an exemplary participant database for storing the identification information for the ISP and organization nodes requiring to form customized web pages, in accordance with the present invention;

FIG. 4 depicts an exemplary participant file database for storing the file information for the participating ISP and organization nodes, in accordance with the present invention;

FIG. 5 depicts an exemplary advertisement database for storing the advertisement information for these ISP and organization nodes requiring to form customized web pages, in accordance with the present invention;

FIG. 6 depicts an exemplary advertisement file database for storing the advertisement files to be displayed, in accordance with the present invention;

FIG. 7 depicts a flowchart illustrating a process of dynamically forming customized web pages for an ISP or organization node at an ICP, in accordance with the present invention;

FIG. 8 depicts a flowchart illustrating a process of selecting advertisements included in a customized web page for an ISP or organization node at an ICP, in accordance with the present invention;

FIG. 9 depicts an exemplary screen display showing a portion of a web page dynamically formed for an ISP or organization node;

FIG. 10 depicts different customized web sites dynamically formed by different ICPs for an ISP or organization, in accordance with the present invention; and

FIG. 11 depicts different customized web sites dynamically formed by an ICPs in response to service requests from different participating ISP nodes, in accordance with the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The present invention discloses novel methods and apparatuses for dynamically forming customized web pages for ISPs, and organizations that have direct access to the Internet.

FIG. 1 depicts an exemplary network system 100, which is able to perform the novel functions of the present invention. To the Internet, all ICPs, ISPs, and organizations that are connected to it can be deemed as network nodes.

As shown in FIG. 1, the network system 100 includes a plurality of user computers (or users) 102.1–102.n; a connecting network 104; a plurality of ISP nodes 108.1–108.m; the Internet 110; and a plurality of ICP nodes 112.1–112.7. To get access to the Internet 110, the user computers 102.1–102.n have to be first connected to one of the ISP nodes 108.1–108.m, via the connecting network 104. The connecting network 104 can be the public switched telephone network, wireless network, cable network, or even power network.

Each of the ISP nodes 108.1–108.m has the hardware and software to access the Internet 110, and may include an

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HTTP server for hosting an ISP web site. For example, ISP node 108.1 contains an HTTP web server 109.1 for hosting an ISP web site. Each of the ISP nodes has a unique Internet domain name and a range of IP addresses.

Each of the ICP nodes 112.1–112.7 has the hardware and software to access the Internet 110, and its respective HTTP server (113.1, 113.2, . . . , or 113.7). Each of the ICP nodes also has a unique Internet domain name and IP address.

In FIG. 1, to obtain web pages from an ICP node, a user computer first initiates a connection process for connecting the user computer to one of the ISP nodes 108.1, 108.2, . . . , or 108.m. By way of example, let us assume that the user computer 102.2 is a subscriber of the ISP node 108.m, and wants to obtain web pages from the ICP node 112.1. The user computer 102.2 initiates a connection process (an example of which is a modem call via the public switched telephone network) to the ISP node 108.m via the connecting network 104. After the completion of the connection process, the ISP node 108.m dynamically assigns an available IP address to the user computer 102.2. Then, the user computer 102.2 sends a service request to the ISP node 108.m via the connecting network 104. Upon receiving the service request from the user computer 102.2, the ISP node 108.m forwards the service request, together with the IP address assigned to the user computer 102.2, to the ICP node 112.1 via the Internet 110. The IP address can be used to identify both the user computer 102.2 and the ISP node 108.m. Upon receiving the service request from the ISP node 108.m, the HTTP server 113.1 in the ICP node 112.1 retrieves the home page and sends it to the ISP node 112.1 via the Internet 110. Upon receiving the home page from the ICP node 112.1, the ISP node 108.m forwards the home page to the user computer 102.2 via the connecting network 104. Upon receiving the home page, the user computer 102.2 can navigate through the web site of the ICP node 112.1 by selecting the page links contained in the home page. After the user computer 102.2 completes the modem call, the ISP node 108.m releases the IP address which was temporarily assigned to the user computer 102.2.

The network system 100 further includes a plurality of organization nodes 114.1–114.k. These organization nodes are owned by corporations, governmental institutions, or universities. Each of the organization nodes contains the hardware and software to access the Internet 110, and has a unique Internet domain name and IP address. Usually, an organization node has an HTTP server, and an Intranet (or local area network) infrastructure for inter-connecting its internal user computers (internal users) within the organization. For example, the organization node 114.2 has an Intranet (or local area network) 116 and an HTTP 118 for hosting a web site for the organization. Connected to the Intranet (or local area network) 116 are internal user computers (internal users) 120.1–120.p. The internal user computers 120.1, 120.2, . . . , 120.p may have dynamically assigned IP addresses or static IP addresses. Via the Intranet (or local area network) 116, the internal user computers can communicate with each other and get access to the web site contained in the HTTP server 118. Via the Intranet (or local area network) 116 and organization node 114.2, the internal user computers can get access to the Internet 110.

An internal user computer communicates with an ICP node through its respective organization node. By way of example, let us assume that internal user computer 120.2 wants to obtain web pages from the ICP node 112.2. To do so, the internal user computer 120.2 sends a service request to the organization node 114.2 via the Intranet (or local area network) 116. Upon receiving the service request from the

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internal user computer 120.2, the organization node 114.2 forwards the service request, together with the IP address assigned to the organization node 114.2, to the ICP node 112.2 via the Internet 110. Upon receiving the service request from the organization node 112.2, the HTTP server 113.2 in the ICP node 112.2 retrieves a home page and sends it to the organization node 114.2 via the Internet 110. Upon receiving the home page from the ICP node 112.2, the organization node 114.2 forwards the home page to the internal user computer 120.2 via the Intranet (or local area network) 116. Upon receiving the home page, the internal user computer 120.2 can navigate through the web site of the ICP node 112.2 by selecting the page links contained in the home page.

Typically, a web site stores information in a set of web page files, such as HTML, SHTML, DHTML, or CGI files (Note: HTML stands for Hypertext Mark Language, SHTML for Secure HTML, DHTML for Dynamic HTML, and CGI for Common Gate Interface). A web page file may contain one or more page links containing the path information to other web page files in the same web site. Thus, using a web browser, a user can access a home page file (the page file at the root level) of a web site. From the home page, the user can browse subsequent web page files by selecting links contained in the home page file. The subsequent web page files may further contain one or more page links, which can be further selected to browse web page files at the next level. At any level, a browser can browse back to the previous web page file and re-select page links from the previous web page file. A web page may contain page links (foreign page links) containing path information to the web pages of the other web sites. Upon selecting a foreign page link contained in a web page file, a service request is sent to the web site indicated by the path information in the foreign page link, to retrieve the web page in the foreign web site.

In addition, a web page file may contain links to other types of files, such as AVI, GIF, JPEG, and PNG files. (Note: GIF stands for Graphics Interchange Format, JPEG for Joint Photographic Expert Group, AVI for audio Video Interface, and PNG for Portable Network Graphic). A web page file may also contain applets. Upon receiving a web page file, a web browser can display it as a web page on a user computer.

FIG. 2 depicts a block diagram illustrating an exemplary computer system 200, which can be used as a hardware platform for an ISP node, an ICP node, or an organization node to perform the functions of the present invention.

As shown in FIG. 2, the computer system 200 includes a system bus 201, a processing unit 202, a memory device 204, a disk drive interface 206, a hard disk 208, a display interface 210, a display monitor 212, a serial bus interface 214, a mouse 216, a keyboard 218, and a network communication interface 220.

The hard disk 208 is coupled to the disk drive interface 206; the monitor display 212 is coupled to the display interface 210; and the mouse 216 and keyboard 218 are coupled to the serial bus interface 214. Coupled to the system bus 201 are the processing unit 202, the memory device 204, the disk drive interface 206, the display interface 210, and the network communication interface 220.

Memory device 204 stores data and programs. Operating together with the disk drive interface 206, the hard disk 208 also stores data and programs. However, memory device 204 has faster access speed than hard disk 208, while the hard disk 208 has higher capacity than memory device 204.

Operating together with the display interface 210, the display monitor 212 provides visual interfaces between the

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programs being executed and users, and displays the outputs generated by the programs.

Operating together with the serial bus interface 214, the mouse 216 and keyboard 218 provide inputs to the computer system 200.

The network communication interface 220 provides an interface between the computer system 200 and the Internet 110 in accordance with predetermined networking protocols.

The processing unit 202, which may include more than one processor, controls the operations of the computer system 200 by executing the programs stored in the memory device 204 and hard disk 208. The processing unit also controls the transmissions of data and programs between the memory device 204 and the hard disk 208.

FIG. 3 depicts an exemplary participant database 300 located at an ICP node for storing the identification information for these ISP and organization nodes requiring to form customized web pages, in accordance with the present invention.

The participant database 300 has three fields: (1) an IP address field 302 containing the IP addresses for the participating ISP and organization nodes, (2) a DNS (Domain Name System) field 304 containing DNS information for the participating ISP and organization nodes, and (3) a name field 306 containing the names of the participant ISP and organization nodes.

In FIG. 3, the IP address "207.104.48.xxx" represents a range of IP addresses. Specifically, the "xxx" designates wild cards that will accept any IP address that matches the "207.104.48" portion of the IP address.

FIG. 4 depicts an exemplary participant file database 400 located at an ICP node for storing file information for the participating ISP and organization nodes, in accordance with the present invention.

The participant file database 400 has four fields: (1) a name field 402 containing the names of the participating ISP and organization nodes, (2) a page portion 1 field 404 containing a file to be displayed in a first predetermined position in a customized web page, (3) a page portion 2 field 406 containing a file to be displayed in a second predetermined position in the customized web page, and (4) a page portion 3 field containing a file to be displayed in a third predetermined position in the customized web page. The files in the three page portion fields can be provided by ISPs and organizations, or designed by an ICP.

In operation, an ICP node is able to determine whether a received service request is from a participating ISP or organization node by looking up the participant database 300. Upon finding the ISP name of a participating ISP or organization node in the participant database 300, the ISP node then looks up the associated files in the participant file database 400 based on the ISP name. It should be noted that the databases 300 and 400 can be combined as one database.

FIG. 5 depicts an exemplary advertisement database 500 located at an ICP node for storing the advertisement information, in accordance with the present invention.

The advertisement database 500 has four fields: (1) a page code field 502 containing individual web page files contained in a customized web page, (2) an IP address field 504 containing the IP addresses for the ISP and organization nodes, (3) a default advertisement field 506 containing the names of the ISP and organization nodes who own the default advertisements, and (4) an alternative advertisement field 508 containing the advertisement files to replace the default advertisements in field 506 as needed.

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In FIG. 5, the advertisements for Mother Lode, Volcano, Gold Rush, and XYZ are preselected to be included in web pages 01, 02, 03, and 04, respectively. The alternative advertisements for Mother Lode, Volcano, Gold Rush, and XYZ are used to replace the respective default advertisements as needed.

FIG. 6 depicts an exemplary advertisement file database 600 located at an ICP node for storing the advertisement files to be displayed, in accordance with the present invention.

The advertisement file database 600 has two fields: (1) an advertisement file field 602 containing advertisement file names, and (2) a name field 604 containing advertisement owners. It should be noted that the databases 500 and 600 can be combined into one database.

In operation, after determining that a service request is from a participating network node, an ICP node first looks up the advertisement database 500, to locate the owner's name of the advertisement to be displayed. The ICP node then locates the corresponding file in the advertisement file database 600.

FIG. 7 depicts a flowchart illustrating the process of dynamically forming a customized web page for an ISP or organization node at an ICP node, in accordance with the present invention. In describing FIG. 7, it is assumed that:

- (1) The ICP node has installed a hardware platform (as shown in FIG. 2) and an application, which are capable of providing web page customization service;
- (2) The ICP node has established page files containing the standard web site material for the ICP;
- (3) The ICP node has created a participant database as shown in FIG. 3 for storing the IP addresses for all participant ISP and organization nodes; and
- (4) The ICP node has created a participant file database as shown in FIG. 4 for storing the names and locations of the files to be included in the page files designed for the ICP node.

In FIG. 7, at step 704, the ICP node receives a service request from a network node.

At step 706, the ICP node captures the IP address contained in the service request.

At step 708, the ICP node compares the captured IP address against the IP addresses stored in the participant database as shown in FIG. 3, to determine whether the network node is a participating ISP or organization node.

At step 708, if the ICP node cannot find the captured IP address in the participant database, the process is led to step 710 to display the page files (including the standard web site material) designed for the ICP node. If the ICP node finds the captured IP address in the participant database, the process is led to step 712.

At step 712, the ICP node dynamically forms customized web pages for the participating network node. Specifically, the ICP locates the page portions in the participant file database as shown in FIG. 4. These page portions are then included in the page files designed for the ICP node.

The embodiment shown in FIG. 7 uses IP address to identify a participating network node. However, it should be noted that the DNS information can also be used to identify a participating network node.

FIG. 8 depicts a flowchart illustrating the process of selecting advertisements to be included in customized web pages for an ISP or organization node at an ICP node, in accordance with the present invention. In describing FIG. 8, in addition to the assumptions in connection with the discussion of FIG. 7, it is further assumed that:

- (5) the ICP node has created an advertisement database as shown in FIG. 5;

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(6) the ICP node has created an advertisement file database as shown in FIG. 6; and

(7) the web site of the ICP node includes four web pages coded 01, 02, 03, and 04, respectively, as shown in FIG. 5.

In FIG. 8, at step 804, the ICP node receives a service request from a network node. The service request contains the information for identifying the web page requested.

At step 806, the ICP node captures the IP address contained in the service request.

At step 807, the ICP node identifies the web page requested by the service request.

At step 808, the ICP node compares the captured IP address against the IP addresses stored in the participant database as shown in FIG. 3, to determine whether the service request is from a participating ISP or organization node.

At step 808, if the ICP node cannot find the captured IP address in the participant database, the process is led to step 810, and if the ICP node finds the captured IP address in the participant database, the process is led to step 812.

At step 810, the ICP node includes the default advertisements in the identified web page. Using the web page structure shown in FIG. 5 as an example, if the service request is not from a participating network node and the identified web page is 02, the ICP node includes the default advertisement for Volcano in the web page 02. The process is then led to step 816 to end the process.

At step 812, if the service request is from a participating network node, the ICP node further determines whether the default advertisement is competing with the participating network node. If the default advertisement is not competing with the participating network node, the process is led to step 810 to include the default advertisement in the identified web page. Using the web page structure shown in FIG. 5 as an example, if the identified web page is 01, the ICP node includes the default advertisement for Mother Lode in web page 01. The process is then led to step 816 to end the process.

At step 814, if the default advertisement is competing with the participating network node, the ICP node includes the alternative advertisement in the identified web page. Using the web page structure shown in FIG. 5 as an example, if the identified web page is 03, the ICP node includes the alternative advertisement of Automotive in the web page 03. The process is then led to step 816.

In FIGS. 5 and 6, the alternative advertisements are so organized that they will not be competing with the participating ISP or organization node that forwards the service request. When a viewer comes to the ICP node, it will see the default advertisements unless the viewer is a subscriber to a competing participating ISP or organization node. If the viewer is a subscriber of a competing participating ISP or organization node, the viewer will see an alternative advertisement. This keeps participating ISP and organization nodes from poaching each others customers.

FIG. 9 depicts an exemplary screen display 900 showing a portion of the web page dynamically formed for a participating ISP or organization node, in accordance with the present invention.

The screen display 900 includes three regions 902, 904, and 906. Specifically, region 904 displays the contents contained in the files designed for the ICP node, and the regions 902 and 906 display the contents contained in the files designed for the participating node. The files designed for regions 904 and 906 can be stored in the participant database file shown in FIG. 4. The regions 902 and 906 may contain customized graphics, applets, links, sounds, and text.

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FIG. 10 depicts different customized web sites dynamically formed by different ICPs for an ISP, in accordance with the present invention. In describing FIG. 10, it is assumed that the ICP nodes 112.1–112.7 shown in FIG. 1 are all capable of dynamically forming web sites for participating network nodes, and that the ISP node 108.1 has obtained the web page customization service from all ICP nodes 112.2–112.7 shown in FIG. 1.

As shown in FIG. 10, by forwarding service requests from its subscribe users to the ICP nodes 112.1–112.7 shown in FIG. 1, the ISP node 108.1 can have seven different customized web sites containing the material specifically designed for the ISP node 108.1.

The principle shown in FIG. 10 also applies to the organization nodes 114.1–114.k shown in FIG. 1. Specifically, by forwarding service requests from its internal users to the ICP nodes 112.1–112.7 shown in FIG. 1, an organization node can have seven different customized web sites containing the material specifically designed for the organization node.

FIG. 11 depicts different customized web sites dynamically formed at an ICPs in response to service requests from different participating ISP nodes, in accordance with the present invention.

As shown in FIG. 11, using the present invention, an ICP node can form partnerships with many ISP and organization nodes. For example, Yahoo Corporation (an ICP) may form partnerships with AT&T, MCI, Sprint, and Netcom, in which Yahoo's content appears in "melded" form when viewed by their subscribers. The principle shown in FIG. 11 also applies to the organization nodes 114.1–114.k shown in FIG. 1.

In the embodiments of the present invention, the databases 300, 400, 500, and 600 can be stored in the memory device 204 or the hard disk 208. The application to perform the steps shown in FIGS. 7 and 8 can be stored in the memory device 204 or the hard disk 208, and executed by the processing unit 202.

While the invention has been illustrated and described in detail in the drawing and foregoing description, it should be understood that the invention may be implemented through alternative embodiments within the spirit of the present invention. Thus, the scope of the invention is not intended to be limited to the illustration and description in this specification, but is to be defined by the appended claims.

What is claimed is:

1. A method for dynamically forming customized web pages for a first type network node at a second type network node, comprising the steps of:

forming at least a page file for the first type network node;
forming at least a page file for the second type network node;
receiving a service request from the first type network node;
identifying the first type network node based on the service request; and
forming a customized page file formed for the first type network node by including the page file formed for the first type network node within the page file for the second type network node.

2. The method of claim 1, wherein the first type network node is an ISP node, and the second type network node is an ICP node.

3. The method of claim 1, wherein the first type network node is an organization node, and the second type network node is an ICP node.

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4. The method of claim 1, wherein the customized page file includes customized graphics, sounds, applets, links, and text.

5. The method of claim 1, wherein the customized page file includes customized advertisements.

6. The method of claim 1, wherein:

the service request includes an IP address for identifying the first type network node, and

identifying the first type network node based on the service request comprises using the IP address included in the service request to identify the first type network node.

7. A method for providing web page customization service to a plurality of first type network nodes at a second type network node, comprising the steps of:

forming at least a page file for each of the first type network nodes;

forming at least a page file for the second type network node;

receiving a service request from one of the first type network nodes;

determining whether the first type network node participates in the web page customization service;

if the first type network node participates in the web page customization service, forming a customized page file for the service request by including the page file formed for the first type network node within the page file formed for the second type network node; and

if the first type network node does not participate in the web page customization service, forming a page file for the service request by using the page file formed for the second type network node.

8. The method of claim 7, wherein the first type network nodes are ISP nodes, and the second type network node is an ICP node.

9. The method of claim 7, wherein the first type network nodes are organization nodes, and the second type network node is an ICP node.

10. The method of claim 7, wherein the customized page file includes customized graphics, sounds, applets, links, and text.

11. The method of claim 7, wherein the customized page file includes customized advertisements.

12. The method of claim 7, wherein:

the service request from one of the first type network nodes includes an IP address for identifying the first type network node, and

determining whether the first type network node participates in the web page customization service comprises using the IPI address included in the service request to identify the first type network node.

13. A method for providing web page customization service to a plurality of first type network nodes at a second type network node, comprising the steps of:

forming a plurality of advertisements for the first type network nodes;

forming at least a page file for the second type network node;

receiving a service request from one of the first type network nodes;

identifying advertisements for the first type network node; and

forming a customized page file for the first type network node by including the identified advertisements within the page file formed for the second type network node.

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14. The method of claim 13, wherein the first type network nodes are ISP nodes, and the second type network node is an ICP node.

15. The method of claim 13, wherein the first type network nodes are organization nodes, and the second type network node is an ICP node. 5

16. The method of claim 13, wherein the identified advertisements do not cause negative impact on the owner of the first type network node.

17. An apparatus for dynamically forming a customized web page for a first type network node at a second type network node, comprising: 10

means for forming at least a page file for the first type network node;

means for forming at least a page file for the second type network node; 15

means for receiving a service request from the first type network node;

means for identifying the first type network node based on the service request; and 20

means for forming a customized page file formed for the first type network node by including the page file formed for the first type network node within the page file for the second type network node. 25

18. The apparatus of claim 17, wherein the first type network node is an ISP node, and the second type network node is an ICP node.

19. The apparatus of claim 17, wherein the first type network node is an organization node, and the second type network node is an ICP node. 30

20. The apparatus of claim 17, wherein the customized page file includes customized graphics, sounds, applets, links, and text.

21. The apparatus of claim 17, wherein the customized page file includes customized advertisements. 35

22. An apparatus for providing web page customization service to a plurality of first type network nodes at a second type network node, comprising:

means for forming at least a page file for each of the first type network nodes; 40

means for forming at least a page file for the second type network node;

means for receiving a service request from one of the first type network nodes; 45

means for determining whether the first type network node participates in the web page customization service;

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means for forming a customized page file for the service request by including the page file formed for the first type network node within the page file formed for the second type network node, if the first type network node participates in the web page customization service; and

means for forming a page file for the service request by using the page file formed for the second type network node, if the first type network node does not participate in the web page customization service.

23. The apparatus of claim 22, wherein the first type network nodes are ISP nodes, and the second type network node is an ICP node.

24. The apparatus of claim 22, wherein the first type network nodes are organization nodes, and the second type network node is an ICP node.

25. The apparatus of claim 22, wherein the customized page file includes customized graphics, sounds, applets, links, and text.

26. The apparatus of claim 25, wherein the customized page file includes customized advertisements.

27. An apparatus for providing web page customization service to a plurality of first type network nodes at a second type network node, comprising:

means for forming a plurality of advertisements for the first type network nodes;

means for forming at least a page file for the second type network node;

means for receiving a service request from one of the first type network nodes;

means for identifying advertisements for the first type network node; and

means for forming a customized page file for the first type network node by including the identified advertisements within the page file formed for the second type network node.

28. The apparatus of claim 27, wherein the first type network nodes are ISP nodes, and the second type network node is an ICP node.

29. The apparatus of claim 27, wherein the first type network nodes are organization nodes, and the second type network node is an ICP node.

30. The apparatus of claim 27, wherein the identified advertisements do not cause negative impact on the owner of the first type network node.

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